

Use figure 1 for #1, 2, 3, & 4.

1. Given:  $m\angle SRT = m\angle STR$ ;  $m\angle 3 = m\angle 4$   
 Prove:  $m\angle 1 = m\angle 2$

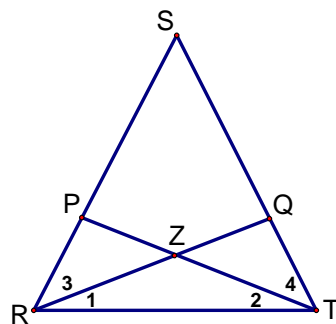


Figure 1

2. Given:  $RP = QT$ ;  $PS = QS$   
 Prove:  $RS = TS$

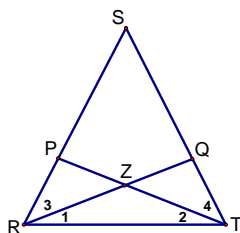


Figure 1

3. Given:  $\overline{RS} \cong \overline{TS}$ ;  $\overline{PS} \cong \overline{QS}$   
 Prove:  $\angle TPS \cong \angle RQS$

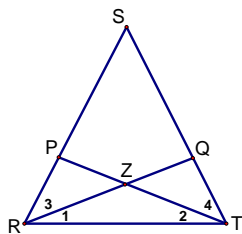


Figure 1

4. Given:  $\overline{RS} \cong \overline{TS}$ ;  $\overline{RP} \cong \overline{TQ}$   
 Prove:  $\overline{PZ} \cong \overline{QZ}$

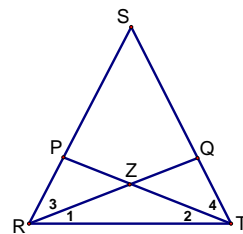


Figure 1

5. Given:  $\overline{AB} \cong \overline{CD}$ ;  $\overline{AB} \parallel \overline{CD}$

Prove:  $\overline{AD} \cong \overline{CB}$

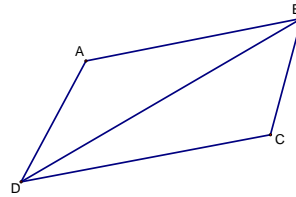


Figure 2

6. Given:  $\overline{AC}$  bisects  $\angle BAD$ ,  $\angle 1 \cong \angle 3$

Prove:  $\overline{BC} \parallel \overline{AD}$

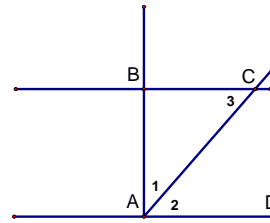


Figure 3

7. Given:  $\overline{AC}$  is a median of  $\triangle ABD$ ,  $AB > AD$

Prove:  $m\angle 1 > m\angle 2$

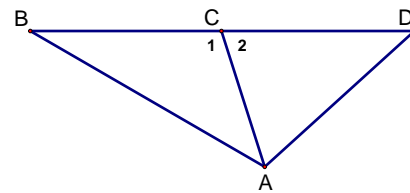


Figure 4

Coordinate proof

Given:  $\triangle OEF$  is a right triangle, M is the midpoint of  $\overline{EF}$

Prove:  $EM = FM = OM$

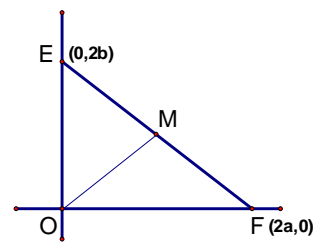


Figure 5